

Cost of Living and Budget

1/17/17

What is a budget?

Organizing your money, deciding what to buy + how much to spend, being smart with your money

What does the phrase "cost of living" mean to you?

bills, taxes, budgeting, housing, clothing, car, food, savings for fun stuff,

Cost of Living and Budget

Household Budget Exploration Project

Income

Expenses: Fixed, Variable

Graphs (3): Income, Fixed Expenses, Variable Expenses

Spreadsheet: Excel or Google Docs Spreadsheet

By Tuesday, 1/24/17:

List of income & expenses for your household

IWBAT

- discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Wages - what you get paid for the work you perform

Hourly wage - what you get paid per hour of work

Salary - your pay for an entire year's worth of work, usually paid monthly

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Overtime - you work extra hours and earn a higher rate of pay (usually 1.5x regular)

Converting from an hourly wage to annual salary:

Johnny makes \$9 per hour for the first 40 hours he works each week. If he works eight hours per day, six days per week for three weeks per month, what is his annual pay?

$$\begin{aligned} 8 \text{ h/d} \times 6 \text{ d/w} &= 48 \text{ h/w} \times 3 \text{ wks/mo} = 144 \text{ h/mo} \times 12 \text{ mo} = 1728 \text{ h/yr} \\ 1440(\$9) &= \$12960 \\ 288(9 \times 1.5) &= \$3888 + \\ &\underline{\$16,848 \text{ yr}} \end{aligned}$$
$$\begin{aligned} \$9 \times 160 &= \$1440 \\ \$13.5 \times 32 &= 432 \\ &\underline{\$1872} \\ &\times 12 \text{ mo} \\ &\underline{\$22,464} \end{aligned}$$

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Converting from annual salary to an hourly wage:

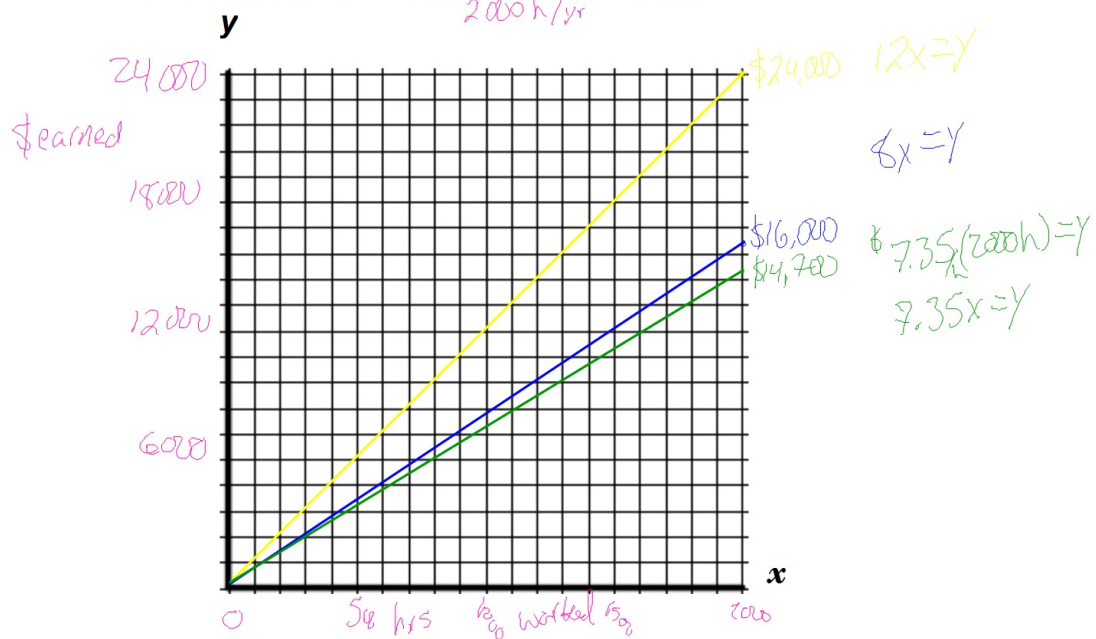
Sonia has accepted a position which pays \$37,000 per year. If she averages 55 hours per week for 42 weeks per year, what is her effective hourly wage?

$$\begin{aligned} \frac{\$37,000}{1 \text{ yr}} \times \frac{1 \text{ wk}}{55 \text{ h}} \times \frac{1 \text{ yr}}{42 \text{ wks}} &= \frac{37000\$}{(55 \times 42) \text{ h}} = \frac{\$37000}{2310 \text{ h}} \\ &= \$16.17/\text{h} \end{aligned}$$

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

Jesus is paid \$7.35/hr. Sara is paid \$8/hr.
 \$24,000 - Shannon is paid \$12/hr. Plot their earnings
 over a year of 40 hr work weeks. (50 wk)



IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Types of Wages

$$\frac{\$/yr}{52 \text{ wk/yr}} = \$/wk$$

$$\frac{\$/wk}{h/wk} = \$/h$$

$$h/wk \cdot \$/h = \$/wk$$

$$\$/wk \cdot 52 \text{ wk/yr} = \$/yr$$

$$\begin{array}{c} \xrightarrow{\text{mult}} \\ \xleftarrow{\text{div}} \end{array}$$

Complete Practice Problems 2.1.2

Graph top to bottom:

Worker A

Worker C

Worker B

$$\text{Alfonso } \frac{\$199.50/wk}{\$9.50/h}$$

$$21 \frac{h}{wk}$$

$$\rightarrow \$9.50/h \cdot 21 \frac{h}{wk} \cdot 52 \frac{wk}{yr}$$

$$\text{OR } \$199.50/wk \cdot 52 \frac{wk}{yr}$$

$$\$10,374/yr$$

By Tuesday, 1/24/17:

List of income & expenses for your household

IWBAT discuss types of wages and how to convert between the types.

Cost of Living and Budget: Compensation Packages 1/20/17

What is compensation? What forms can it take?

Awarded to someone as recompense - for injury
Payment for services rendered/performed

money

education/training

future employment

promotion

raise

housing

future favor

insurance

discount

free access

PTO/Vacation

Retirement

product

transportation

Cost of Living and Budget: Compensation Packages 1/20/17

IWBAT discuss compensation packages,
what may be included in one, and how to
calculate the value of a compensation
package.

Cost of Living and Budget: Compensation Packages

Insurance

- ✓ Life
- Auto / Boat
- Home
- ✓ Health/Medical
- phone ins /elec.
- Renters
- ✓ Vision
- ✓ Dental
- Pet
- ✓ Worker's Compensation

Vacation/PTO

- Medical leave
- Maternity leave
- Paid holidays
- Sabbatical
- PTO (paid vacation)
- Sick days
- Personal days
- Flex Time

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Retirement - saving for the future so you don't have to work forever

401(k) / 403(B) IRA Roth

Employer contribution - how much your employer pays towards the benefit

Matching contribution - a dollar or % of your deposits matched by the employer

Contribution limits - the maximum your employer will contribute to your benefit plan

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Total Compensation

Wages + other benefits

By Tuesday, 1/24/17:

List of income & expenses for your household

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Total compensation

An architect's compensation package includes the total cost of a \$250-per-month health insurance plan, the total cost of a \$35-per-month life insurance plan, and a salary of \$55,000 per year. What is the yearly value of the compensation package?

$$\begin{aligned} HI & \$250/\text{mo} \times \frac{12\text{ mo}}{y} = \$3000/\text{yr} \\ LI & \$35/\text{mo} \times 12\text{ mo/y} = \$420/\text{yr} \\ \text{Salary} & \$55,000/\text{yr} + \\ & \underline{\hspace{1.5cm}} \\ & \$58,420/\text{yr} \end{aligned}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

What is the annual value of a 401(k) plan in which the employer agrees to match 2.5% up to \$15,000 if the employee contributes \$15,000?

employee + employer = annual value

$$\$15,000 + (0.025) \$15,000 = \$15,375$$

What is the true hourly wage of a job that pays \$17 per hour and allows 10 hours of paid time off for every 200 hours worked? $200 + 10 = \text{paid for } 210\text{h}$

$$\frac{\$17(210)}{200} = \$17.85$$
$$210\text{h} (\$17/\text{h}) = \$3570$$
$$\frac{\$3570}{200\text{h worked}} = \$17.85/\text{h worked}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Convert hh:mm time into decimal time & reverse.

Example: 2:30 is 2h 30min which equals 2.5h

$$1:15 = 1.25\text{h} \quad 3:45 = 3.75\text{h}$$

$$2:20 = 2.33\text{h} \quad 6:10 = 6.17\text{h}$$
$$.16\bar{6}$$

Convert decimals into percents and reverse.

$$0.36 \times 100 = 36\% \quad \frac{9\%}{100} = 0.09$$

$$1.24 = 124\% \quad 251\% = 2.51$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

A compensation package that includes vacation pay, retirement, and life insurance but allows all employees to choose which compensation they prefer. This is known as a *cafeteria plan*.

If an employer agrees to pay a portion of the college tuition of an employee, this is known as *educational reimbursement*.

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Floyd's employer purchased a health insurance plan that costs \$825 per month. Floyd pays \$105 toward the plan each month. What is the annual value of the employer's contribution?

$$\begin{array}{r} \$825 \\ - 105 \\ \hline \$720 \\ \times 12 \\ \hline \$8640 \end{array}$$

Floyd pays $\$105/\text{mo} (12 \text{ mo}) = \1260
Employer pays $\boxed{}$
Total cost $\$825/\text{m} (12 \text{ mo}) = \9900
 $\$9900 - 1260 = \8640

A corporate attorney has weekends off and has 30 paid vacation days per year, including holidays that fall on weekdays. If his salary is \$119,600 per year, what is his pay per workday?

$$\begin{array}{r} 365 \\ - 30 \text{ vacay} \\ \hline 335 \\ - 2(52) \text{ WE} \\ \hline 231 \text{ WORK} \end{array}$$
$$\frac{\$119,600/\text{yr}}{231 \text{ workdays/yr}} = \$517 / \text{work day}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Compensation Packages

Last year, Rachel contributed \$105 each month toward her 401(k) account. If her employer matched 17% of her contributions, what was the total amount contributed to the 401(k) at the end of the year?

$$\begin{aligned} \$105 + 17.85 &= \$122.85/\text{mo} \\ (.17)(105) &\times 12 \text{ mo} \\ \hline & \$1474.20/\text{yr} \end{aligned}$$

IWBAT discuss compensation packages, what may be included in one, and how to calculate the value of a compensation package.

Cost of Living and Budget: Piece Rate

1/25/17

An assembly technician has weekends off and has 15 paid vacation days per year, including holidays that fall on weekdays. If her salary is \$63,700 per year, what is her pay per workday?

$$\begin{aligned} 104 \text{ WE} + 15 \text{ PTO} &= 119 \text{ days off/yr} \\ 365 - 119 &= 246 \text{ workdays} \end{aligned}$$

$$\begin{aligned} & \$63,700 \\ & \underline{246 \text{ workdays}} \\ & = \$258.94/\text{work day} \end{aligned}$$

IWBAT

- how to estimate hourly pay from piece rate
- model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

What is piece rate?

You are paid per piece of work completed.

Cost of Living and Budget: Piece Rate

Cliff worked 9 hours yesterday, produced 28 units, and earned \$8.75 for each unit produced. Find Cliff's average hourly wage.

$$\begin{array}{r} \$8.75/u \times 28u = \$245 \\ \hline 9h \end{array} = \$27.22/h$$

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

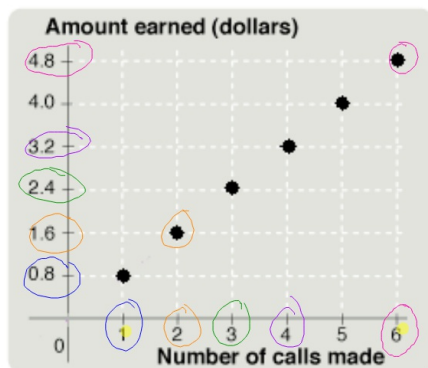
A property inspector gets paid \$350 for each property inspected. If it takes him 8 hours on average to inspect a property and he spends 48 hours each week inspecting properties, what is his average hourly wage?

$$\$350 / 8h = \$43.75/hr$$

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

Cost of Living and Budget: Piece Rate

A telemarketer earns a fixed amount for each call that he makes, as shown in the graph below. If the telemarketer makes 12 calls, how much will he earn in total?



$$2 \times 6 = 12$$
$$2 \times \$4.8 = \$9.60$$

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

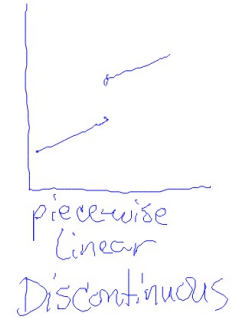
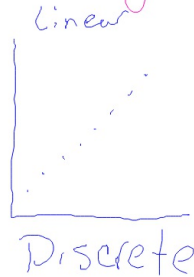
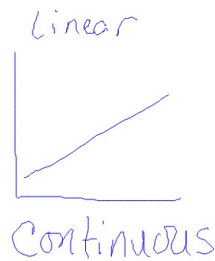
Cost of Living and Budget: Piece Rate

Practice: 2.3.2

IWBAT how to estimate hourly pay from piece rate, and model piece rates using scatter plots.

What is a linear equation? What is the difference between a continuous graph and a discrete graph?

A linear equation has a constant rate of change. Its graph is a line.



IWBAT

- model a salary that includes a starting bonus
- understand the y-intercept in a linear equation
- use piece-wise functions to model changes in salary
- explore the graphing function of a graphing calculator.

Cost of Living: Linear Equations and Wages

Review the general equation of a line and relate it to hourly wages.

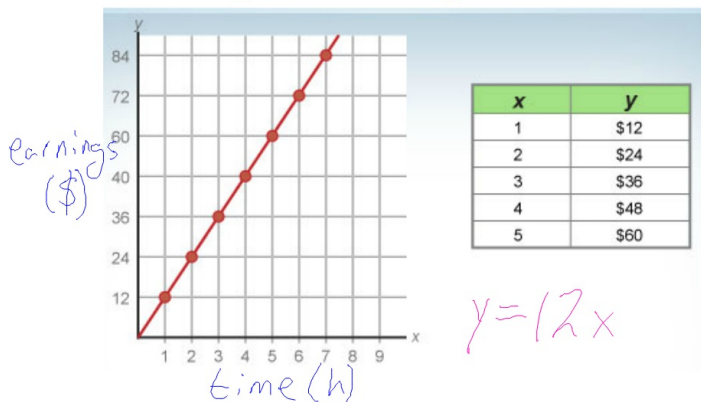
$$y = mx + b$$

money earned hourly rate of pay hours worked starting bonus

What is the equation of a line whose y-intercept is not zero? $y = 12x + 600$

\$12/hr
+\$600 starting/signing bonus

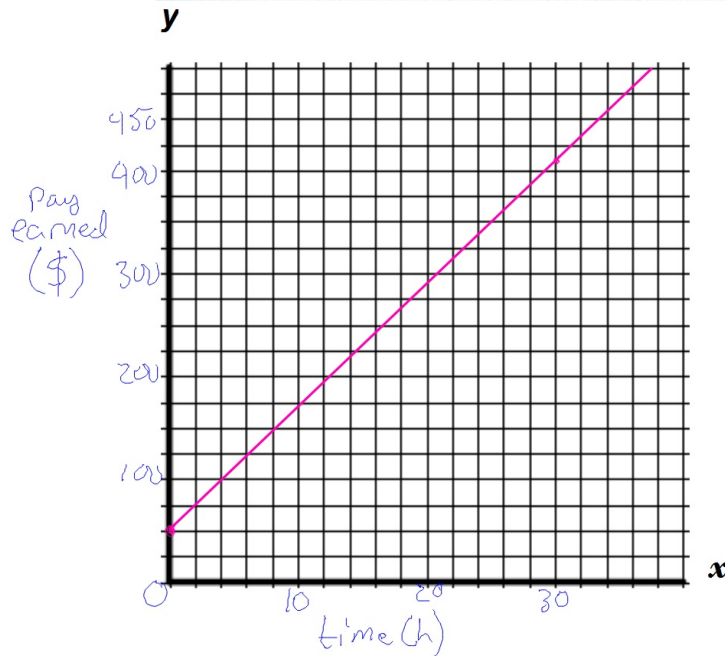
Cost of Living: Linear Equations and Wages



IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

Cost of Living: Linear Equations and Wages

Suppose you are given a \$50 signing bonus at the boutique in addition to your \$12 an hour wage. You will now fill in a table for this situation, where x is the number of hours

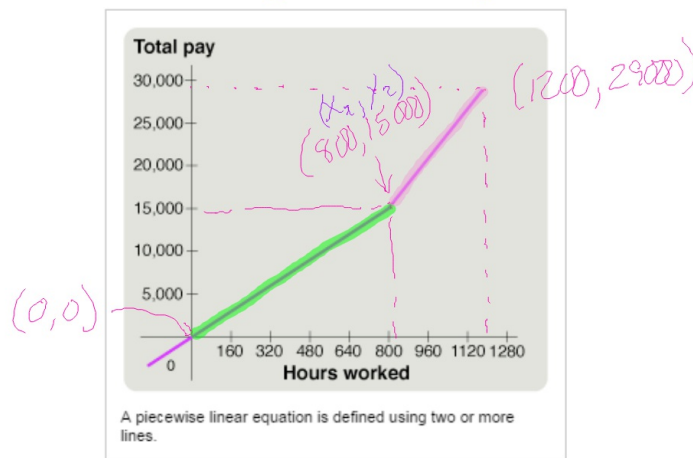


$$y = 12x + 50$$

$$410 = 12(30) + 50$$

IWBAT model a salary that includes a starting bonus, understand the y -intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

Cost of Living: Linear Equations and Wages



$$y = mx + b$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{15000}{800} = \frac{150}{8} = 18.75$$

$$y = 18.75x$$

$$y = mx + b$$

$$m = \frac{29000 - 15000}{1200 - 800} = \frac{14000}{400}$$

$$m = \frac{140}{4} = 35$$

$$y = 35(x - 800) + 15000$$

$$y = m(x - x_2) + y_2$$

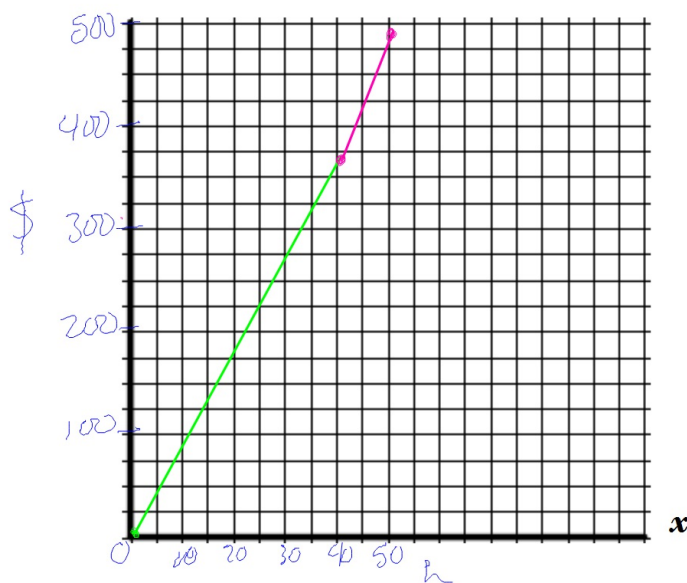
$$y = \begin{cases} 18.75x, & 0 \leq x \leq 800 \\ 35(x - 800) + 15000, & x > 800 \end{cases}$$

piece-wise equation

IWBAT model a salary that includes a starting bonus, understand the y -intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

Cost of Living: Linear Equations and Wages

Johnny makes \$9 per hour for the first 40 hours he works each week and makes 1.5*regular for overtime. Graph his pay. Give the piecewise equations.



Reg. $y = 9x$ $y = 9(40) = 360$
 $(0,0)$ $(40,360)$

OT $y = 13.5(x - 40) + 360$

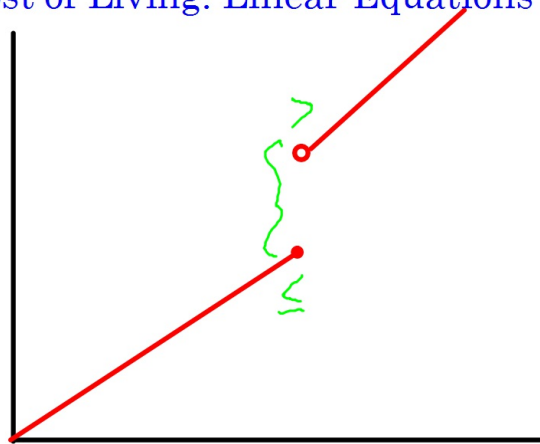
$m = 1.5(9) = 13.5$

$y = 13.5(50 - 40) + 360$

$y = 13.5(10) + 360 = 495$
 $(50, 495)$

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

Cost of Living: Linear Equations and Wages



piecewise
continuous

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

Cost of Living: Linear Equations and Wages

Practice: 2.4.2

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

IWBAT model a salary that includes a starting bonus, understand the y-intercept in a linear equation, use piece-wise functions to model changes in salary, and explore the graphing function of a graphing calculator.

Cost of Living: Percentages and Commission

1/26/17

What is ten percent of 23,638?

$.10 (23638) = 2363.8$

What is ten percent of 7,500 plus fifteen percent of 15,000?

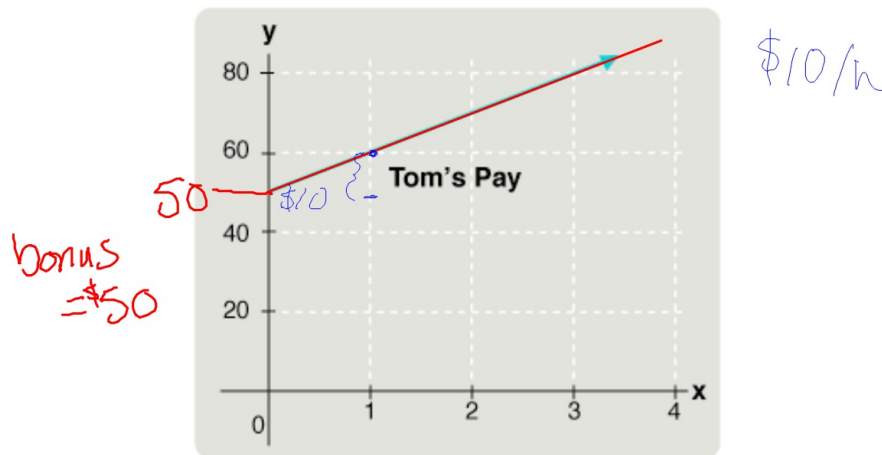
$.10(7500) + .15(15000) =$
 $750.0 + 2250.0 = \$3000$

What is ten percent of 23,638?

What is ten percent of 7,500 plus fifteen percent of 15,000?

$$.10(7500) + .15(15000) = 750.0 + 2250.0 = \$3000$$

Given a graph, determine the employee's rate of pay and, if there was a bonus, the amount of that bonus.



IWBAT

- understand graduated commission and base pay
- use percentages to compute a total commission.

Cost of Living: Percentages and Commission

What does it mean to be paid a commission?

You are paid depending on your sales.

Push money money for selling a specific product

Cost of Living: Percentages and Commission

Straight Commission

Same percentage no matter how much you sell or the prices

Flat Commission (Piece Rate)

a set dollar amount per item

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Graduated Commission

Sold \$35,000

\$18,000

\$100

$(18,000 - 1,000)(.20)$

\$3,400

\$0

\$3,500

| Amount Sold | Commission |
|-------------------|------------|
| Up to \$1000 | 10% |
| \$1000 - \$20,000 | 20% |
| Over \$20,000 | 25% |

$\$1,000 (.10) = \100

$(20,000 - 1,000)(.20) = \$3,800$

$(35,000 - 20,000)(.25) = \$3,750 +$

\$7,650 total commission

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Total Commission

Total commission = number of items sold *
commission rate * cost of item sold

$$\begin{aligned} \$864 &= 32 \text{ comp } (3\%) (\$900) \\ &32 \cdot 27 \end{aligned}$$

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Total Income

Total income = base pay + total commission

$$\$2844 = \$1980 + \$864$$

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Cost of Living: Percentages and Commission

Practice: 2.5.2

IWBAT understand graduated commission and base pay, and use percentages to compute a total commission.

Calculate the commission for an employee.

John is an appliance salesman. His pay is based on commission only and is currently 26% for each appliance sold. Last month he sold 3 dishwashers for \$499 each, 2 freezers for \$199 each, and 1 stainless steel oven for \$899. Find the total commissions John earned last month.

$$[3(499) + 2(199) + 899](.26) = \$726.44$$

IWBAT

- Categorize budget expenditures/expenses

Cost of Living: Budget Odyssey

Guidelines for budget exploration activity & record of decisions w/ reasoning

IWBAT categorize budget expenditures/expenses

Cost of Living: Budget Odyssey

Working with a partner, you will:

1. Proceed to <http://econedlink.org/i145> .
2. Play the game Budget Odyssey online.
3. Discuss all decisions with your partner.
4. Record all of your decisions and reasoning on the graphic organizer (more copies available if needed).
5. Continue playing until you can complete the game without any incorrect decisions.
6. Turn in your graphic organizer at the end of class or the successful conclusion of the game (whichever comes first).
7. Work on previously assigned work which remains incomplete. **Now is a good time to set up your budget spreadsheet, if you have not already done so.**

IWBAT categorize budget expenditures/expenses

Cost of Living: Budget Odyssey

**Turn in your completed
record of expenditure
categorizations w/ reasoning.**

IWBAT categorize budget expenditures/expenses

Cost of Living: Required Paycheck Deductions 1/30/17

Categorize a set of budget expenditures/expenses

| | |
|--------------------------|---------------------------------|
| Student loan payment | Income |
| Savings account interest | Paycheck |
| Mortgage payment | Savings account interest |
| Renter's insurance | Birthday money |
| Purchase snow boots | |
| Groceries | Fixed expenses |
| Paycheck | Mortgage payment Diapers |
| Tattoo | Renter's insurance Groceries |
| Diapers | Student loan payment |
| Birthday money | |
| | Variable expenses |
| | Tattoo Birthday money |
| | Purchase snow boots |
| | Groceries |
| | Diapers |

IWBAT

- understand which deductions are required on a paycheck
- calculate how each deduction is made
- work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

What kinds of things are found as deductions on a paycheck?

- ✓ Federal Taxes
- ✓ Social Security
- ✓ Child Support
- ✓ Medicare
- ✓ State Income Tax
- City/County I Tax
- Retirement
- Health Ins.
- Dental Ins
- Vision Ins
- Union Dues

Court Ordered Withholding

Garnishment

Taxes

| Deduction |
|----------------------------|
| PENSION-COLORADO PERA |
| CITY OCCUPATIONAL HEAD TAX |
| STATE WITHHOLDING TAX |
| FEDERAL WITHHOLDING TAX |
| MEDICARE TAX - EMPLOYEE |

Company Taxes

| Deduction |
|---------------|
| PERA-EMPLOYER |

Pre-Tax Deductions

| Deduction |
|------------------------------|
| DELTA EXCLUSIVE PANEL PRETAX |
| CIGNA - HMO LOW - Pretax |
| VISION INSURANCE PRETAX |

After-Tax Deductions

| Deduction |
|--------------------------------|
| DEN CLASSROOM TCHRS ASSOC - FT |

Company Deductions

| Deduction |
|----------------------|
| CIGNA - HMO LOW - ER |

Cost of Living: Required Paycheck Deductions

Gross income *total income before taxes*

Net income *your income after taxes + other deductions*
"Take home pay"

Required deductions:

- Federal Income Tax
- State Income Tax
- Social Security
- Medicare

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Federal Insurance Contributions Act (FICA)

FICA = Social Security + Medicare

Social Security: 6.2%
Medicare: 1.45% *} 7.65%*

Pay periods:

- Annually *1 time per year*
- Quarterly *4*
- Monthly *12*
- Biweekly *26*
- Weekly *52*
- Semi-monthly *24*

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Johnny makes \$9 per hour for the first 40 hours he works each week. He is paid biweekly. How much is deducted from his paycheck for FICA?

$$\$9/h \cdot 80h \cdot 0.0765 = \$55.08$$

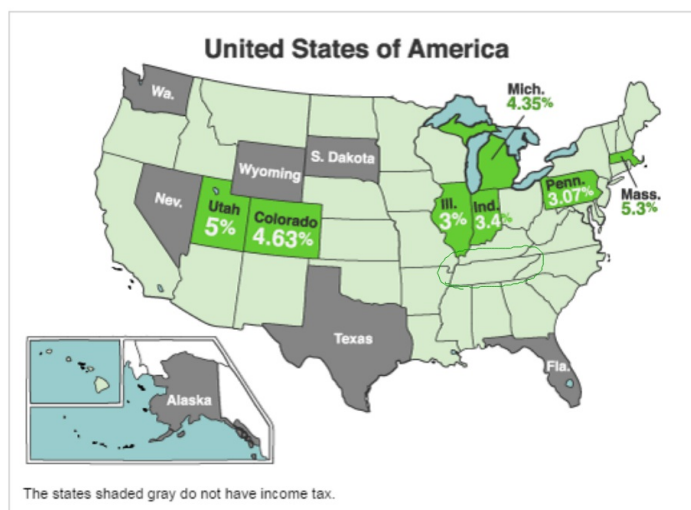
IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

State Income Tax

None

Flat tax *everyone pays the same % of their income in taxes*



IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Income Tax

Progressive tax

the higher incomes are taxed at a higher %

Tax brackets

divisions in income with a specific tax rate

Single Taxpayers:

| If Taxable Income Is: | The Tax Is: |
|---------------------------------------|--|
| Not over \$9,075 | 10% of the taxable income |
| Over \$9,075 but not over \$36,900 | \$907.50 plus 15% of the excess over \$9,075 |
| Over \$36,900 but not over \$89,350 | \$5,081.25 plus 25% of the excess over \$36,900 |
| Over \$89,350 but not over \$186,350 | \$18,193.75 plus 28% of the excess over \$89,350 |
| Over \$186,350 but not over \$405,100 | \$45,353.75 plus 33% of the excess over \$186,350 |
| Over \$405,100 but not over \$406,750 | \$117,541.25 plus 35% of the excess over \$405,100 |
| Over \$406,750 | \$118,118.75 plus 39.6% of the excess over \$406,750 |

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Required Paycheck Deductions

Practice: 2.6.2

IWBAT understand which deductions are required on a paycheck, calculate how each deduction is made, and work through examples where all deductions are taken into account.

Cost of Living: Optional Paycheck Deductions

1/31/17

Imagine you are applying for a job that pays \$46,200 per year.
You live in New York, which has the following income tax brackets:

| Single and married filing separately — filing status ① and ③. | | | |
|---|--------------|-------------------|-----------------------------|
| over | but not over | The tax is: | |
| \$ 0 | \$ 8,000 | | |
| 8,000 | 11,000 | \$320 plus 4.5% | of the excess over \$ 8,000 |
| 11,000 | 13,000 | 455 plus 5.25% | " " " " |
| 13,000 | 20,000 | 560 plus 5.9% | " " " " |
| 20,000 | 200,000 | 973 plus 6.85% | " " " " |
| 200,000 | 500,000 | 13,303 plus 7.85% | " " " " |
| 500,000 | | 36,853 plus 8.97% | " " " " |

Your federal income tax rate is 22%. What is your net income after all required deductions?

FIT
STIT
Medicare } FICA
Soc Sec } .0765

$$\text{FIT + FICA } \$46,200 \cdot (.2965) = \$13,698$$

$$\text{ST } \$973 + (.0685)(46,200 - 20,000) = \$2,767.70$$

$$\begin{array}{r} \$13,698 \\ + 2,767.70 \\ \hline \$16,465.70 \end{array}$$

$$\begin{array}{r} \$46,200.00 \\ - 16,465.70 \\ \hline \$29,734.30 \end{array}$$

Cost of Living: Optional Paycheck Deductions

1/31/17

IWBAT

- explore optional deductions such as health insurance, life insurance, disability, and retirement
- practice computing optional deductions
- understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

What kinds of deductions are optional?

Dental Health } Insurance
Life
Vision

Charity

Garnishment

City Income Tax

Union dues

Retirement

Uniform

Taxes

| Deduction |
|----------------------------|
| PENSION-COLORADO PERA |
| CITY OCCUPATIONAL HEAD TAX |
| STATE WITHHOLDING TAX |
| FEDERAL WITHHOLDING TAX |
| MEDICARE TAX - EMPLOYEE |

Company Taxes

| Deduction |
|---------------|
| PERA-EMPLOYER |

Pre-Tax Deductions

| Deduction |
|------------------------------|
| DELTA EXCLUSIVE PANEL PRETAX |
| CIGNA - HMO LOW - Pretax |
| VISION INSURANCE PRETAX |

After-Tax Deductions

| Deduction |
|--------------------------------|
| DEN CLASSROOM TCHRS ASSOC - FT |

Company Deductions

| Deduction |
|----------------------|
| CIGNA - HMO LOW - ER |

Cost of Living: Optional Paycheck Deductions

Medical Insurance - to help you recover from illness or injury and to keep you healthy

Health

Dental

Vision

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Disability Insurance - injury prevents you from carrying out the duties of your job

SSD

workman's compensation

Life Insurance - pays your beneficiaries in the case of your demise

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Retirement - money to get you through your old age after you are no longer working

401(k)/403(B) Pension
for profit nonprofit IRA

Pre-tax vs. Post-tax

↳ items reduce your taxable income

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Calculating Deductions

$$\text{deduction per paycheck} = \frac{\text{annual cost}}{\text{\# of paychecks}} * \% \text{ employee covers}$$

Ana's employer covers 80% of the cost of a \$5700-per-year health insurance plan, and her share of the cost of the plan is her only optional deduction. How much is deducted from Ana's paycheck each month for health insurance?

$$\frac{\$5700}{12} = \$475/\text{paycheck}$$

$$\$475(.20) = \$95/\text{paycheck deducted}$$

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Cost of Living: Optional Paycheck Deductions

Practice: 2.7.2

IWBAT explore optional deductions such as health insurance, life insurance, disability, and retirement, practice computing optional deductions, and understand which optional deductions reduce your taxable income.

Calculate an employee's monthly insurance deduction.

Braden's employer covers 30% of the cost of a \$11,100-per-year health insurance plan, and Braden's share of the cost of the plan is his only optional deduction. How much is deducted from Braden's biweekly paycheck for health insurance?

$$\begin{array}{l}
 \text{Emp. } \$11,100 (.30) = \$3,330 \\
 \text{Braden } \$11,100 (.70) = \$7,770 \\
 \begin{array}{r}
 \$11,100 \\
 - 3,330 \\
 \hline
 \$7,770
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 \$7,770 \\
 \hline
 52 \text{ weeks}
 \end{array}
 = \$149.42$$

$$\begin{array}{l}
 \text{biweekly} \times 2 \\
 \hline
 \$298.84
 \end{array}$$

IWBAT

- explore various sources of income
- consider the relationship between income and career preparation
- explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

Explore various sources of income.

Employment

Pros:

Dependable income — you have a paycheck every week, every two weeks, or every month. The type of employment you can obtain is dependent on your education and experience — things you can control. You work regular hours — usually 35 to 40 each week.

Cons:

You are usually not in charge. Typically you do not get to make your own hours or choose what projects or tasks you must do. Your wages, hours, and level of responsibility are ultimately up to someone else.

Self-employment

Freelance

Business owner

| | Self-employed | Business owner |
|--------------|---|---|
| Differences | You are providing something that you are required to produce. | You own or run an entity that produces something. |
| | If you take time off, then you will not generate any income. | You can take time off and the business will still operate and generate revenue. |
| Similarities | You are your own boss. You must make all decisions. There are no taxes deducted from your gross income automatically. You must do this on your own. | |

Investment

buy stocks, bonds

Cost of Living: Income and Career

Education

Degrees

Associates 2yr
AS AA

Bachelors 4yr Assoc 2yr
BS BA

Masters Bach + 2yr
MS MA MBA MEd

Doctoral Master + 2 or more yrs
PhD

Professional

MD, DDS, PDO Bach + 3yr + 3yr residency

JD Bach + 3yr

Certificate - school

days to a few months

CNA

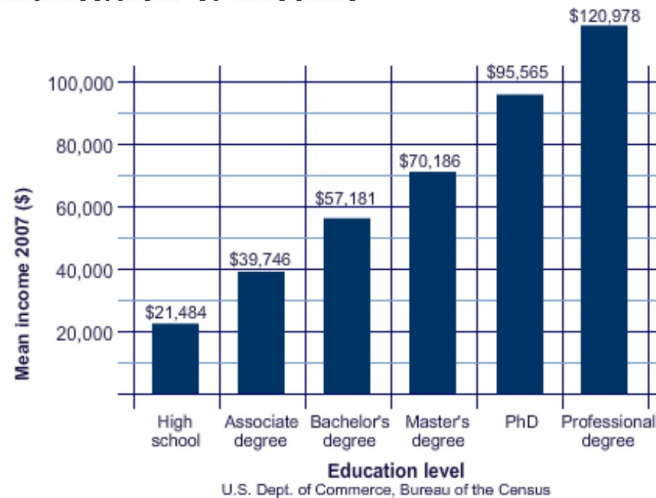
Restoration

Auto body

Computer Software

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career Education & Income



IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career Unemployment

$$\text{Unemployment} = \frac{\text{\# of workers willing and able to work but who are jobless}}{\text{total workers}}$$

To write this ratio as a percentage, you multiply its decimal form by 100.

$$\text{Unemployment rate (\%)} = \frac{\text{\# of workers willing and able to work but who are jobless}}{\text{total workers}} \cdot 100$$

Working with Unemployment Rates

This is a table of unemployment rates. For instance, by looking at the table, you can tell that in February of 2002, 5.7% of the population was unemployed.

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| 2000 | 4.0 | 4.1 | 4.0 | 3.8 | 4.0 | 4.0 | 4.0 | 4.1 | 3.9 | 3.9 | 3.9 | 3.9 |
| 2001 | 4.2 | 4.2 | 4.3 | 4.4 | 4.3 | 4.5 | 4.6 | 4.9 | 5.0 | 5.3 | 5.5 | 5.7 |
| 2002 | 5.7 | 5.7 | 5.7 | 5.9 | 5.8 | 5.9 | 5.8 | 5.7 | 5.7 | 5.7 | 5.9 | 6.0 |
| 2003 | 5.8 | 5.9 | 5.9 | 6.0 | 6.1 | 6.1 | 6.3 | 6.1 | 6.1 | 6.0 | 5.8 | 5.7 |
| 2004 | 5.7 | 5.6 | 5.8 | 5.6 | 5.6 | 5.6 | 5.6 | 5.4 | 5.4 | 5.5 | 5.4 | 5.4 |
| 2005 | 5.3 | 5.4 | 5.2 | 5.2 | 5.1 | 5.1 | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 | 4.9 |
| 2006 | 4.7 | 4.8 | 4.7 | 4.7 | 4.6 | 4.6 | 4.6 | 4.7 | 4.5 | 4.4 | 4.5 | 4.4 |
| 2007 | 4.6 | 4.5 | 4.4 | 4.5 | 4.4 | 4.6 | 4.4 | 4.6 | 4.7 | 4.7 | 4.7 | 5.0 |
| 2008 | 5.0 | 4.8 | 5.1 | 5.0 | 5.4 | 5.5 | 5.4 | 6.1 | 6.2 | 6.6 | 6.9 | 7.4 |
| 2009 | 7.7 | 8.2 | 8.6 | 8.9 | 9.4 | 9.5 | 9.4 | 9.7 | 9.8 | 10.1 | 10.0 | 10.0 |
| 2010 | 9.7 | | | | | | | | | | | |

Data taken from Bureau of Labor Statistics

1. If there were 7.7 million people unemployed in December of 2007, how many millions of people were available to work?

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

Okun's Law $\% \text{ change in GDP} = 3\% - 2 * (\% \text{ change in unemployment rate})$

Types of unemployment

Structural *your skills are no longer needed*

Frictional *between jobs at the moment*

Cyclical *follows business cycles*

Unemployment resistant careers *military, police, fire, EMT, Doctors, grocers, teachers, self-employed, transportation, Nurses, golf, farmers*

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

Cost of Living: Income and Career

$89,000,000 (.059) = \text{unemployed}$

Practice: 2.8.2

$3\% - 2(\% \text{ change})$

$10 \rightarrow 8$
 -2

$$\frac{\text{unemp}}{\text{total}} = \text{unemp} \% \quad (\pm)$$

$$\frac{\text{unemp}}{\%} = \frac{(\pm) \%}{\%}$$

$$\text{total employable} = \frac{\text{unemp}}{\%}$$

IWBAT consider the relationship between income and career preparation, explore correlations between income and a worker's skills, education, type of work, and the health of the economy.

What possible careers are in your future?

aesthetician

tattoo artist

nurse RN-obstetrics
-pediatrics

attorney

police officer

IWBAT

- Explain that supply and demand are the primary factors in determining wages.
- Identify several specific factors that affect wage rates.
- Explore wage rates in their potential careers.

Cost of Living: Wages and Me

Using the interview form, discuss plans for researching a possible career with two other students. Record their responses on your form.

IWBAT explain that supply and demand are the primary factors in determining wages, identify several specific factors that affect wage rates, and explore wage rates in their potential careers.

Cost of Living: Wages and Me

Procedure

1. Retrieve a computer.
2. Read page one of assignment.
3. Proceed to the URL in **bold**.
(http://www.bls.gov/oes/current/oes_nat.htm)
4. Follow the directions on page one of the assignment.
5. Record your answers to questions #1-10.
6. Write a short summary below "Conclusion" explaining
 - what you need to do over the next five years for your chosen career *OR*
 - why you now are looking into a different career other than the one chosen for this exploration.

IWBAT explain that supply and demand are the primary factors in determining wages, identify several specific factors that affect wage rates, and explore wage rates in their potential careers.

Cost of Living: Wages and Me

Using the interview form, reinterview one student after they have completed their research and have written their conclusion. Record their responses on your form.

Turn in both forms.

Work on practice problems 2.8.2

IWBAT explain that supply and demand are the primary factors in determining wages, identify several specific factors that affect wage rates, and explore wage rates in their potential careers.

Cost of Living: Cost of Living and Budget

2/09/17

In the country of Apexistan, 6.9% of the population was unemployed in September of 2014. If there were 186,000,000 people willing and able to work in Apexistan during that month, how many people were unemployed?

$$186,000,000 \times .069 = 12,834,000 \text{ unemployed}$$

IWBAT

- analyze how economic conditions affect income
- explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Compare income to the cost of living in various geographical areas.

| CPI | New York | Philadelphia | Los Angeles | Cleveland | Atlanta |
|----------------|----------|--------------|-------------|-----------|---------|
| Overall | 165 | 92 | 156 | 78 | 112 |
| Food | 142 | 106 | 113 | 106 | 100 |
| Housing | 203 | 56 | 235 | 27 | 134 |
| Utilities | 165 | 130 | 115 | 126 | 93 |
| Transportation | 120 | 117 | 108 | 106 | 104 |
| Health | 182 | 102 | 120 | 113 | 104 |
| Miscellaneous | 136 | 112 | 107 | 100 | 99 |

CPI compares the cost of living in each area to the average for the nation (100).

Denver

<http://www.bls.gov/cpi/>

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Standard of living How well one can live in a place for a given income

CPI ↓ Standard ↑ for an income level
of living

Budget How much you can spend depending on your income so you don't go broke.

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Budget items

Housing 1 week's pay
or $\frac{1}{4}$ of monthly income

\$36,000 salary
52 \$692.31

Utilities water, sewer, electricity, nat. gas, fuel oil
minimize costs

Groceries only buy what you need, buy in bulk,
Store brands, shop around, coupons, sale

Other expenses clothes, repair costs, baby stuff,
toiletries, entertainment, momma's treat,
eating out

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

Cost of Living: Cost of Living and Budget

Practice: 2.9.2

IWBAT analyze how economic conditions affect income and explore various types of monthly expenditures.

2.10 Cost of Living and Budget Review

2/10/17

Create formulas in spreadsheet

Create a Chart/Graph in spreadsheet

2.10 Cost of Living and Budget Review

IWBAT

- demonstrate my proficiency on practice problems before my unit test.

2.10 Cost of Living and Budget Review

Key vocabulary

2.1 Hourly wage, salary

2.2 Total compensation

2.3 Piece rate

2.4 Slope, intercept, piece-wise linear

2.5 Percentage, commission, graduated commission, total commission

2.6 Deductions, FICA, gross income, net income, flat tax, progressive tax, tax brackets

2.7 Pre-tax vs. post-tax

2.8 Unemployment rate, structural unemployment, frictional unemployment, cyclical unemployment

2.9 Cost of living, standard of living, budget

IWBAT demonstrate my proficiency on practice problems before my unit test.

2.10 Cost of Living and Budget Review

Key skills

2.1 Converting from salary to hourly wage and from hourly wage to salary

2.2 Calculate total compensation

2.3 Convert piece rate to hourly wage

2.4 Express hourly wage and starting bonus as linear equation, express overtime as a set of piece-wise linear equations

2.5 Calculate total commission

2.6 Calculate required deductions

2.7 Calculate per paycheck deductions for optional deductions

2.8 Calculate number of unemployed and number of available workers via the unemployment rate equation

As a class, complete an explanation of each key skill (11 total).

IWBAT demonstrate my proficiency on practice problems before my unit test.

2.10 Cost of Living and Budget Unit Test

2/14/17

Paper test 2.10.5

IWBAT demonstrate proficiency on my unit test.